



## 09/600,99



## PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau

(51) International Patent Classification <sup>6</sup>:
C12N 15/12, C07K 14/475, 19/00, A61K 38/18

(11) International Publication Number:

WO 99/38967

A2 |

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(43) International Publication Date:

5 August 1999 (05.08.99)

(21) International Application Number:

PCT/EP99/00478

(22) International Filing Date:

27 January 1999 (27.01.99)

(30) Priority Data:

MI98A000179

30 January 1998 (30.01.98)

IT

(71) Applicant (for all designated States except US): DOMPE' S.P.A. [IT/IT]; Via Campo di Pile, I-67100 L'Aquila (IT).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): MEDICO, Enzo [IT/IT]; Via Campo di Pile, I-67100 L'Aquila (IT). MICHIELI, Paolo [IT/IT]; Via Campo di Pile, I-67100 L'Aquila (IT). COLLESI, Chiara [IT/IT]; Via Campo di Pile, I-67100 L'Aquila (IT). CASELLI, Gianfranco [IT/IT]; Via Calle di Pile, I-67100 L'Aquila (IT). COMOGLIO, Paolo [IT/IT]; Via Calle di Pile, I-67100 L'Aquila (IT).
- (74) Agent: MINOJA, Fabrizio; Bianchetti Bracco Minoja S.r.l., Via Rossini, 8, I-20122 Milano (IT).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

## **Published**

Without international search report and to be republished upon receipt of that report.

(54) Title: RECOMBINANT PROTEINS DERIVED FROM HGF AND MSP

(57) Abstract

Recombinant proteins deriving from recombination of structural domains deriving from the  $\alpha$  subunits of HGF and/or MSP growth factors. The recombinant proteins of the present invention have biological activity, and protect cells from death (apoptosis) induced by chemotherapeutic drugs. These molecules can conveniently be used to prevent or to treat the toxic side effects of chemotherapeutic agents used in cancer therapy.